

NOVEMBER/DECEMBER 2025

**23UEMB53 — RECOMBINANT DNA
TECHNOLOGY**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define Gene cloning.
2. What are Plasmids?
3. Tell about Electroporation.
4. Define Cosmid.
5. What is Blotting?
6. Tell about Electrophoresis.
7. Define Cell culture.
8. What are Callus?
9. Tell about Human gene therapy.
10. Define Transgenic animals.



SECTION B — ($5 \times 5 = 25$ marks)

Answer ALL questions.

11. (a) Explain the steps involved in Gene cloning.
Or

(b) Summarize about Restriction endonuclease.

12. (a) Classify Lambda phage.

Or

(b) Explain pBR 322.

13. (a) Explain about PAGE.

Or

(b) Summarize DNA finger printing.

14. (a) Explain Crown gall tumor.

Or

(b) Summarize the principles of animal cell culture.

15. (a) Classify Bt Cotton.

Or

(b) Explain somatic gene therapy.

SECTION C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Discuss about Isolation of Chromosomal and Plasmid DNA.

17. Elaborate about Artificial gene transfer methods

18. Discuss in detail about PCR.

19. Explain about Animal cell culture.

20. Elaborate notes on transgenic plants.